



Brainwave Technology

The Awakened Minds CDs use a specific type of audio technology to guide your brain into various brainwave states. Combining this technology with the soothing sounds of rain results in an incredibly powerful journey to heightened levels of consciousness and awareness.

The *Insight CD* works to guide your mind through the Alpha state into a deeply meditative Theta state, then gradually lowers it further into the Delta range. This state of mind is wonderfully conducive to the exploration of deeper levels of consciousness. The *Focus CDs* work to enhance Alpha and Beta brain activity, triggering highly focused attention and mental clarity.

To understand why these details are significant, it is important to understand how the brain contributes to a person's state of mind and level of consciousness.

Brainwave States

There are several types of brainwave states. Your brain consistently cycles through each of these brainwave states many times throughout the day and night. It is a completely natural biological occurrence in every human being.

Your brain does not operate in only one brainwave state at a time but instead pulses in all these brainwave states simultaneously, with one of the states being dominant at any given time. The dominant state indicates your "state of mind" or level of consciousness. Each of these brainwave states occurs in a specific frequency range.

Beta

The Beta brainwave state is associated with a heightened state of alertness and focused concentration. When your mind is actively engaged in mental activities, the dominant brainwave state will be Beta. A person in active conversation, playing sports or making a presentation would be in a Beta state. The Beta brainwave state corresponds to frequencies ranging from 13Hz to 40Hz.

Alpha

Alpha brainwaves are slower in frequency than Beta brainwaves and represent a state of relaxed mental awareness or reflection. Alpha brainwave states are typically associated with contemplation, visualization, problem solving and accessing deeper levels of creativity. The Alpha brainwave state corresponds to frequencies ranging from 8 Hz to 12 Hz.

Theta

Theta brainwaves are even slower in frequency and represent a state of deep relaxation and

meditation, enhanced creativity, stress relief, light sleep and dreaming. Theta brainwave states have been used in meditation for centuries. Research has proven thirty minutes a day of Theta meditation can dramatically improve a person's overall health and well-being. Theta meditation has also been known to cause the need for less sleep. The Theta brainwave state corresponds to frequencies ranging from 4Hz to 8 Hz.

Delta

Delta brainwaves are the slowest in frequency and represent a state of deep dreamless sleep. Delta brainwave states have long been associated with healing. While Delta brainwave states usually only occur in deep sleep, it is possible to train yourself to remain awake while reaching the Delta state to experience even deeper levels of meditation and awareness. The Delta brainwave state corresponds to frequencies from 0Hz to 4Hz.

Gamma

Gamma brainwave states are the most rapid in frequency. They have received the least attention and research, although more attention is currently being paid to them than in years past. Research has indicated at moments when bursts of precognition or high-level information processing occur, your brainwaves briefly reach the Gamma state. The Gamma brainwave state corresponds to frequencies of 40Hz or higher.

With the help of the Awakened Minds audio technology, you can guide your brain into any of these brainwave states naturally and effortlessly, simply by listening to an audio CD using stereo headphones. No special equipment is required. As long as you are using stereo headphones, you can listen via your stereo, a portable CD player, or even your computer's CD-ROM drive.

Binaural Beats

Binaural beats were originally discovered in 1839 by German experimenter H. W. Dove. He discovered when signals of two different frequencies are presented separately, one to each ear, the brain detects the phase variation between the frequencies and tries to "reconcile" that difference.

In doing so, as the two frequencies mesh in and out of phase, the brain creates its own third "phantom" signal—a binaural beat—equal to the difference between those two frequencies.

For example, if a frequency of 100 Hz is presented to the left ear, and a frequency of 105 Hz is presented to the right ear, the brain "hears" a third frequency pulsing at 5 Hz, the exact difference between the two frequencies.

Research has proven that introducing a binaural beat will cause the brain to begin resonating in tune with the frequency of that beat. This is called the Frequency Following Response and was thoroughly researched in 1973 by biophysicist Gerald Oster at Mount Sinai Hospital in New York City. His research on binaural beats and the frequency following response was

published in *Scientific American* and paved the way for further development in the area of auditory stimulation to enhance brain functioning.

Since that time, binaural beat technology has been endorsed by scores of doctors and scientists around the world.

Your Brain & the Frequency Following Response

By introducing a binaural beat via stereo headphones, you can guide your brain into very specific brainwave frequencies via the Frequency Following Response.

For example, by listening to a binaural beat pulsing at a frequency of 5 Hz—a low Theta frequency—you can trigger your brain to resonate at that same 5 Hz frequency, automatically inducing brainwaves in the Theta range.

When your brain begins to resonate with the binaural beat, or "follow" along with the beat, it is called the Frequency Following Response.

While the scientific effects of binaural beats on the brain were not formally studied until the 1970s, various cultures have been inducing the frequency following response through more primitive means for thousands of years.

By introducing a harmonically layered combination of frequencies and binaural beats to your brain via the Awakened Minds audio technology, you can effortlessly induce amazingly powerful states of focused concentration or deep relaxing meditation while stimulating various parts of your brain to work together in synchronization.

Whole Brain Synchronization

When both hemispheres of the brain begin to resonate to the binaural beat in synchronization, this is called "whole brain synchronization". This is also sometimes referred to as "whole brain functioning" or "hemispheric synchronization".

Whole brain synchronization occurs when the various parts of your brain begin to work together, resonating at the same frequencies and causing neural pathways to fire more rapidly.

The left and right sides of your brain begin to work in concert with each other. Electrical activity and energy patterns in your brain become more widespread throughout the brain instead of remaining confined to certain areas. Your brain reaches extraordinary levels of consciousness not normally attainable without years of practice.

Research has indicated this type of "whole brain synchronization" is present in the brain at times of intense creativity, clarity and inspiration. EEG patterns recorded from various test groups comprised of extremely successful individuals also displayed an extraordinarily high level of "whole brain synchronization".

By listening to the Insight CD or the Focus 2-Disc Set, you can train your brain to function at this high level of synchronization, opening up the way for positive and beneficial effects.

From the moment you first listen to the Awakened Minds audio technology, your brain will begin the process of reorganizing itself for higher thinking and enhanced levels of consciousness.

Stimulate New Neural Development in the Brain

While using the Awakened Minds audio technology, electrical activity and energy patterns in your brain become more widespread throughout the brain instead of remaining confined to certain areas.

When this type of stimulation to the brain occurs, your brain begins to create new neural pathways. The neural stimulation encourages new dendritic growth within the brain. New dendritic growth allows for faster and smoother neural communication in the brain, and also provides more "processing power" in the brain. The dendrites are the many branching fibers extending from the neuron/cell body. These fibers increase the surface area available for receiving incoming information. The more dendrites the brain has at its disposal, the more quickly and smoothly it can process information.

Dendritic growth is process that occurs throughout our lifetime. Whenever you learn something new, such as learning to play the piano, new dendritic growth occurs as a result of stimulating the mind in a new and different way. At the same time, old dendritic connections can become inactive and dissipate. (The shortening of dendritic branches and the reduction of the number of branches is associated with senility in the elderly.)

One of the goals in using the Awakened Minds audio technology is to stimulate dendritic growth to occur on an ongoing basis to provide an ideal situation for the brain, allowing the brain to operate at its maximum possible potential rather than only using a portion of its potential, and allowing the brain to establish dendritic growth for long-term benefits, including benefits that work to counteract the debilitating effects of aging.

Harmonically Layered Frequencies

Most companies offering binaural audio recordings stop with one frequency, introducing only one binaural beat that may gradually raise or lower your brainwaves into a specific

frequency over a period of time, usually in anywhere from 10 to 60 minutes.

What's wrong with only one binaural frequency? Your brain typically operates not in only one frequency but in all brainwave frequencies simultaneously, with one frequency typically being the dominant one at any given time.

Every moment of the day and night, various brainwaves in your brain are pulsing in delta, theta, alpha, beta, and even gamma frequency ranges, all at the same time. Your brain has its own individual brainwave patterns, incorporating a combination of all the frequencies pulsing in your brain. Just like your fingerprints or vocal patterns, your brainwave patterns are unique to you.

Our Awakened Minds CDs don't use just one binaural frequency. Instead, we harmonically layer our binaural frequencies to create actual patterns, not just single frequencies. Our binaural frequencies are combined in a way that replicates your brain's natural way of functioning, with frequencies that interact with your own brainwaves to evoke the most powerful response on all levels for a dramatically improved listening experience.

Not only do we layer our binaural frequencies based on the way your brain naturally functions, we also use a form of harmonic layering with a foundation in the principles of music science. Even though the binaural frequencies are placed beneath the sounds of natural rain, and are embedded below the audible level and therefore not heard out loud in the same manner music would be heard, the brain still responds more effectively to binaural frequencies that are blended together in a harmonically pleasing way that is soothing to the ear and mind. This enhances the effectiveness of the audio technology and allows your brain to resonate smoothly and comfortably with the binaural beats.

By introducing these harmonically layered binaural frequencies through listening to the Insight CD or the Focus 2-Disc Set via stereo headphones, you can effortlessly trigger whole brain synchronization, enhancing communication between various parts of the brain and stimulating neural pathways in the brain to fire at increased rates.

In addition to using harmonically layered binaural frequencies in complex mind-stimulating combinations, Awakened Minds uses the soothing sounds of rain arranged in a very specific way to enhance the listening experience even further.

Binaural Beats in History

From the droning chant of Tibetan monks to the rhythmic beat of a Native American drum, sound has played an important role in healing and spiritual practice throughout history. Primitive cultures were aware of the powerful and beneficial effects of binaural beats on the brain centuries before modern science recognized those same effects.

Research conducted by Melinda Maxfield, PhD, demonstrates how the drumbeats found in

the rituals of various cultures beat at a steady rate of 4.5 beats per second, inducing a trance-like state in listeners. This trance-like state is a result of the brain's shift into a 4.5-beats-per-second brainwave pattern, a low Theta brainwave state.

Using repetitive beats or chanting, Native American shamans, Hindu healers, Tibetan monks, Sufi dervishes, and practiced Yogis have been able to induce an entire range of brainwave states for healing and the attainment of higher levels of consciousness. In India, there exist songs and mantras created specifically for use in curing illness and disease, practiced by Babaji—Hindu healers—to heal even such medical problems as arthritis and smallpox.

Everywhere we turn, in every culture throughout history, binaural beats have been a powerful tool in the healing process, as well as a guide in spiritual ceremony and ritual. At Awakened Minds, Inc., we've taken the research and those thousands of years of proven effects and paired them with the power of today's technology.

For more details please visit:

www.awakenedminds.com